



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/972,125	10/05/2001	Michael A. D'Annunzio	7784-000194	3670

27572 7590 06/16/2005

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. BOX 828
BLOOMFIELD HILLS, MI 48303

EXAMINER

CHOUDHURY, AZIZUL Q

ART UNIT	PAPER NUMBER
----------	--------------

2145

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/972,125

Applicant(s)

D'ANNUNZIO ET AL.

Examiner

Azizul Choudhury

Art Unit

2145

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/25/03, 1/31/02.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Detailed Action

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 and 7-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Li et al (US Pat No: 5,473,599), hereafter referred to as Li.

1. With regards to claim 1, Li teaches a method for re-configuring communications between a host, a first router and a second router on a network in the event of a failure of the first router, wherein the host, first router and second router are all operating on an Internet Control Message Protocol (ICMP) Router Discovery Protocol (IRDP), the method comprising the steps of: designating said first router as a primary router by using said IRDP to assign said first router a first preference value which said first router includes in advertisements it sends out to said host on said network; designating said second router as a backup router by using said IRDP to assign said second router a second preference value which said backup router includes in advertisements it sends out to said host on said network; causing said host to transmit data over said network to said primary router subsequent to receiving an advertisement from said primary router; and in

the event said host does not receive an advertisement from said primary router within a predetermined time period, causing said host to recognize an advertisement from said backup router and to treat said backup router as a primary router, and to transmit data to said backup router, whereby said backup router routes said data received from said host over said network to a desired destination using a filter with said host to prevent receipt of an advertisement from a router other than said primary router or said backup router that is pre-authorized to act as a primary router

(Li discloses a design for standby routers (column 2, lines 16-30, Li). A number of routers standby while the main router performs its tasks. All the routers send out "hello" messages (equivalent to the claimed advertisements) (column 2, line 65 – column 3, line 14, Li). The routers also have priorities (equivalent to the claimed preference values) (column 2, lines 44-64, Li). When it is determined that a router needs to be replaced, either for backup purposes (column 3, lines 14-39, Li), priority purposes or lack of "hello" messages (advertisements) (Figure 3, Li), another router is selected to take on the role as primary router. Plus, the design allows for the use of ICMP with router discovery as claimed as well (column 1, line 26-28, Li). Finally claim 15 of Li's design states how ICMP redirect packets are block from being sent to the host. In addition, Li adds how it is important to prevent the host from discovering the primary MAC addresses of routers in the standby group (column 16, lines 8-12, Li). Hence the claimed filtering means are present within Li's design).

2. With regards to claim 2, Li teaches the method wherein a plurality of said backup routers are provided, each of said backup routers being in communication with said host on said network and each being assigned a preference value; and further comprising said host using said backup router that has the highest preference value when said primary router fails (Li's design allows for a plurality of standby (backup) routers (column 2, lines 16-30, Li). The routers have priority values (equivalent to the claimed preference values) (column 2, lines 44-64, Li). When a router fails, a new primary router is selected based on the priority values).
3. With regards to claim 3, Li teaches the method further comprising the step blocking the reception of Type 9 and Type 10 ICMP packets transmitted on said network to said host by any router operating on said network (Type 9 and 10 ICMP packets are broadcast/advertisement packets, called "hello" messages in this design. Claim 15 discloses how ICMP redirect packets are blocked from being sent to the host as claimed).
4. With regards to claim 4, Li teaches the method further comprising the step of configuring said primary router to receive data packets from a plurality of independent computer devices (Since a router takes over the role of another

router in Li's design, it is inherent that the "new" primary router is configured to receive data as claimed).

5. With regards to claim 5, Li teaches a method for re-configuring communications between a host, a first router and a second router on a network in the event of a failure of the first router, wherein the host, first router and second router are all operating on an Internet Control Message Protocol (ICMP) Router Discovery Protocol (IRDP), the method comprising: configuring said host for communication with a plurality of personal computing devices; causing said host to recognize a first one of said routers which transmits an advertisement which includes an address having the highest preference value of all of said routers as a default router; in the event said default router ceases transmitting advertisements on said network for a given period of time, causing said host to remove said first one of said routers as said default router from a routing table maintained by said host; causing said host to recognize said router having the next highest preference value in its advertisement, as a secondary default router, and designating said secondary default router as a new default router in said routing table of said host; and in the event said secondary default router ceases transmitting advertisements for a given period of time while said first one of said routers has also ceased transmitting advertisements, then causing said host to recognize said router transmitting advertisements having the next highest preference value to that of the secondary router as a tertiary router, and

designating said tertiary router as said default router in said router table of said host; and using a packet filter with said host to prevent receipt of an advertisement from a router not pre-authorized to act as a primary router (Li discloses a design for standby routers (column 2, lines 16-30, Li). A number of routers standby while the main router performs its tasks. All the routers send out "hello" messages (equivalent to the claimed advertisements) (column 2, line 65 – column 3, line 14, Li). The routers also have priorities (equivalent to the claimed preference values) (column 2, lines 44-64, Li). When it is determined that a router needs to be replaced, either for backup purposes (column 3, lines 14-39, Li), priority purposes or lack of "hello" messages (advertisements) (Figure 3, Li), another router is selected to take on the role as primary router. This is done, as many times as needed until there are no more routers to rely on. In addition, all networks using routers make use of routing tables. Plus, the design allows for the use of ICMP with router discovery as claimed as well (column 1, line 26-28, Li). Finally claim 15 of Li's design states how ICMP redirect packets are block from being sent to the host. In addition, Li adds how it is important to prevent the host from discovering the primary MAC addresses of routers in the standby group (column 16, lines 8-12, Li). Hence the claimed filtering means are present within Li's design).

6. With regards to claim 9, Li teaches the method wherein using at least one packet filter comprises the step of blocking the receipt by said host of any advertisement

transmitted to it on said network which comprises one of a Type 9 and a Type 10 packet to insure against the diversion of data packets transmitted from said host to an authorized router transmitting advertisements on said network (Claim 15 of Li's design states how ICMP redirect packets are block from being sent to the host. Hence the claimed filtering means are present within Li's design).

7. With regards to claim 8, Li teaches a method for re-configuring communications between a host, a first router and a second router on a network in the event of a failure of the first router, wherein the host, first router and second router are all operating on an Internet Control Message Protocol (ICMP) Router Discovery Protocol (IRDP), the method comprising: configuring said host for communication with a plurality of personal computing devices; causing said host to recognize a first one of said routers which transmits an advertisement which includes an address having the highest preference value of all of said routers as a default router; in the event said default router ceases transmitting advertisements on said network for a given period of time, causing said host to remove said first one of said routers as said default router from a routing table maintained by said host; causing said host to recognize said router having the next highest preference value in its advertisement, as a secondary default router, and designating said secondary default router as a new default router in said routing table of said host; and in the event said secondary default router ceases transmitting advertisements for a given period of time while said first one of said routers has

also ceased transmitting advertisements, then causing said host to recognize said router transmitting advertisements having the next highest preference value to that of the secondary router as a tertiary router, and designating said tertiary router as said default router in said router table of said host; and using at least one packet filter on said host to restrict the advertisements said host can receive on said network

(Li discloses a design for standby routers (column 2, lines 16-30, Li). A number of routers standby while the main router performs its tasks. All the routers send out "hello" messages (equivalent to the claimed advertisements) (column 2, line 65 – column 3, line 14, Li). The routers also have priorities (equivalent to the claimed preference values) (column 2, lines 44-64, Li). When it is determined that a router needs to be replaced, either for backup purposes (column 3, lines 14-39, Li), priority purposes or lack of "hello" messages (advertisements) (Figure 3, Li), another router is selected to take on the role as primary router. This is done, as many times as needed until there are no more routers to rely on. In addition, all networks using routers make use of routing tables. Plus, the design allows for the use of ICMP with router discovery as claimed as well (column 1, line 26-28, Li). Finally, claim 15 of Li's design states how ICMP redirect packets are block from being sent to the host. Hence the claimed filtering means are present within Li's design).

8. With regards to claim 9, Li teaches the method wherein the step of using at least one packet filter comprises blocking the reception by said host of all Type 9 data packets transmitted to it on said network (Type 9 and 10 ICMP packets are broadcast/advertisement packets, called "hello" messages in this design. Claim 15 discloses how ICMP redirect packets are blocked from being sent to the host as claimed).
9. With regards to claim 10, Li teaches the method wherein using at least one packet filter comprises blocking the reception by said host of all Type 10 data packets transmitted to it on said network (Type 9 and 10 ICMP packets are broadcast/advertisement packets, called "hello" messages in this design. Claim 15 discloses how ICMP redirect packets are blocked from being sent to the host as claimed).
10. With regards to claim 11, Li teaches a method for re-configuring communications between a host, a first router and a second router on a network in the event of a failure of the first router, wherein the host, first router and second router are all operating on an Internet Control Message Protocol (ICMP) Router Discovery Protocol (IRDP), the method comprising: designating said first router as a primary router by using said IRDP to assign said first router a first preference value which said first router includes in advertisements it sends out to said host on said network; designating said second router as a backup router by using said

IRDP to assign said second router a second preference value which said backup router includes in advertisements it sends out to said host on said network; causing said host to transmit data over said network to said primary router subsequent to receiving an advertisement from said primary router; and in the event said host does not receive an advertisement from said primary router within a predetermined time period, causing said host to recognize an advertisement from said backup router and to treat said backup router as a primary router, and to transmit data to said backup router, whereby said backup router routes said data received from said host over said network to a desired destination; and using a filter on said host to restrict the types of advertisements said host may receive to thereby eliminate the possibility of an unauthorized router that has gained access to said network transmitting advertisements that cause said host to recognize said unauthorized router as said default router (Li discloses a design for standby routers (column 2, lines 16-30, Li). A number of routers standby while the main router performs its tasks. All the routers send out "hello" messages (equivalent to the claimed advertisements) (column 2, line 65 – column 3, line 14, Li). The routers also have priorities (equivalent to the claimed preference values) (column 2, lines 44-64, Li). When it is determined that a router needs to be replaced, either for backup purposes (column 3, lines 14-39, Li), priority purposes or lack of "hello" messages (advertisements) (Figure 3, Li), another router is selected to take on the role as primary router. This is done, as many times as needed until there are no more routers to rely on. In

addition, all networks using routers make use of routing tables. Plus, the design allows for the use of ICMP with router discovery as claimed as well (column 1, line 26-28, Li). Finally, claim 15 of Li's design states how ICMP redirect packets are block from being sent to the host. Hence the claimed filtering means are present within Li's design).

11. With regards to claim 12, Li teaches the method wherein using a filter comprises blocking all Type 9 advertisement packets transmitted on said network (Type 9 and 10 ICMP packets are broadcast/advertisement packets, called "hello" messages in this design. Claim 15 discloses how ICMP redirect packets are blocked from being sent to the host as claimed).

12. With regards to claim 13, Li teaches the method wherein using a filter comprises blocking all Type 10 advertisement packets transmitted on said network (Type 9 and 10 ICMP packets are broadcast/advertisement packets, called "hello" messages in this design. Claim 15 discloses how ICMP redirect packets are blocked from being sent to the host as claimed).

Response to Remarks

The amendment and remarks received on February 9, 2005 have been carefully evaluated but are not deemed fully persuasive. Both the amendments and remarks focus on the filter to prevent un-authorized router broadcasts from being used. Li's

design takes this into account. Claim 15 of Li's design states how ICMP redirect packets are block from being sent to the host. In addition, Li adds how it is important to prevent the host from discovering the primary MAC addresses of routers in the standby group (column 16, lines 8-12, Li). Hence the claimed filtering means are present within Li's design.

As per the priority claims to the provisional application, the priority claim of September 6, 2001 is accepted.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Azizul Choudhury whose telephone number is (571) 272-3909. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Valencia Martin-Wallace can be reached on (571) 272-6159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AC


ZARNI MAUNG
SUPERVISORY PATENT EXAMINER